

MEMORANDUM

May 26, 2010

TO: LOWER WILLAMETTE GROUP
cc: Michael Schiewe, Joan Snyder and Krista Koehl

FROM: BARBARA D. CRAIG AND JOHN IANI

RE: Portland Harbor—Recommended Framework for ESA Consultation

I. BACKGROUND

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) waives all requirements for all federal, state or local permits for on-site actions. The remedial action must instead comply with applicable or relevant and appropriate requirements (ARARs) as determined by the Environmental Protection Agency (EPA), including statutory and regulatory criteria identified by the state (i.e., State of Oregon for Portland Harbor). The Endangered Species Act (ESA) has been identified as an action-specific ARAR by the Lower Willamette Group (LWG) and EPA. In EPA's "Guidance on the Portland Harbor Feasibility Study" (March 28, 2008), EPA requested that the alternatives evaluation in the LWG's Feasibility Study consider how the cleanup actions can be consistent with and supportive of the conservation and recovery of ESA listed species. Specifically, EPA requested that the scope and cost of required "mitigation" be considered during the evaluation of remedial action alternatives.

Beginning in September 2008, the LWG and the City of Portland contacted various individuals within the National Marine Fisheries Service (NMFS) to schedule a meeting with NMFS and EPA to initiate a programmatic framework approach that would evaluate impacts to critical habitat to ensure the remedial actions comply with the ESA. A copy of the LWG's talking points for that conversation was provided to Jennifer Steger at NMFS in February 2009 to facilitate the scheduling of such a meeting. NMFS was not able to schedule such a meeting until December 11, 2009. Since then, the LWG, EPA and NMFS have had four meetings to discuss this issue.

As agreed at those meetings, a matrix is being created to evaluate impacts to riverine habitat from the types of remedial actions being contemplated and to evaluate the associated "mitigation" to offset those impacts. The mitigation would be performed as compensatory mitigation under the Clean Water Act (CWA) as well as to ensure there will not be a finding of jeopardy based on adverse impacts to critical habitat. The primary goal is to help ensure that, in its evaluation and discussion of remedial action alternatives, the Feasibility Study cost estimates for each of the alternatives will adequately estimate the costs to comply with the CWA and ESA (e.g., at +50% to -30%). Second, the framework would be used later during site-specific implementation under EPA CERCLA consent decrees or orders as a starting point for EPA's

7(a)(2) ESA consultations on those remedial actions (as discussed below, although CERCLA requires only the “substantial equivalent” of this NMFS process, in practice, ESA compliance has generally been documented through formal NMFS Biological Opinions).

During one meeting, NMFS raised the issue that it may not be satisfied that the water quality standards being used by EPA to establish cleanup standards and performance standards for the remedial actions are adequately protective of listed species. Specific concerns were raised about the effects of copper on salmon and the fact that NMFS has not consulted on EPA’s adoption of and/or EPA’s approval of Oregon’s aquatic life criteria. NMFS requested that EPA send a letter requesting a “pre-consultation” so that NMFS could allocate the resources to study this issue further and evaluate the specific criteria being used. NMFS also indicated that EPA and NMFS should engage in a 7(a)(2) consultation on the Proposed Plan and that NMFS would then issue a Biological Opinion associated with EPA’s preferred alternative prior to or at the time of the Record of Decision (ROD). At later meetings, significant progress has been made on the substance of the mitigation matrix, and there have not been further discussions on the specific consultation process to be followed.

To date, EPA has not formally responded to NMFS with respect to the process to be followed. This memorandum discusses the interaction between ESA and CERCLA and recommends a framework for a path forward.

II. CERCLA PROCESS

A. NMFS INVOLVEMENT IN CERCLA PROCESS and ESA CONSIDERATIONS IN REMEDIAL INVESTIGATION PHASE

NMFS has been participating in the CERCLA process and in the development of the Remedial Investigation report, including the Draft Ecological Baseline Assessment, pursuant to the Portland Harbor Superfund Site Memorandum of Understanding to ensure compliance with the ESA. *See MOU at 2 (The Parties intend through this MOU to provide a framework for coordination and cooperation in the management of the Site to optimize federal, state, and tribal expertise and available resources to *** Incorporate the expertise of federal agencies which have listed species at the Site pursuant to the federal Endangered Species Act * * *).* The LWG is paying NMFS’s oversight costs for its participation.

With respect to the ESA, one important focus of the LWG has been ensuring that the baseline ecological risk assessment (BERA) appropriately evaluates risk to threatened and endangered species found at or near the study area. In accordance with EPA’s Problem Formulation for the Baseline Risk Assessment at the Portland Harbor Superfund Site (February 15, 2008), which we understand was developed with input from NMFS, the LWG’s draft risk assessment evaluated risks to threatened and endangered species at the organism level, rather than the population level. Specifically, the risk assessment compared exposure concentrations to lower toxicity thresholds (i.e., no observed adverse effect levels (NOAELs) rather than lowest observed adverse effect levels (LOAELs)).

In several circumstances throughout the remedial investigation, risk assessments and now the beginning of the feasibility study, EPA has required the LWG to screen against existing surface water aquatic life protection criteria or apply them as performance criteria, which the LWG has done. To the LWG's knowledge, until the recent March 3 meeting, NMFS had not, in the context of the Portland Harbor Superfund Site, voiced any concerns regarding the protectiveness of the aquatic protection water quality standards. However, at that meeting and the April 7 meeting, NMFS stated concerns that certain water quality standards may not be sufficiently protective for listed species.

B. FEASIBILITY STUDY AND RECORD OF DECISION

The purpose of a feasibility study for a contaminated sediment site is to develop and conduct a comparative analysis of a number of alternative methods for achieving the remedial action objectives for the site. The Feasibility Study is intended to address all the clean up alternatives that pass the initial alternatives screening. EPA will evaluate the alternatives based upon the nine CERCLA criteria: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume through treatment; (5) short term effectiveness; (6) implementability; (7) cost; (8) state acceptance; and (9) community acceptance. 40 C.F.R. § 300.430(e)(9)(iii). EPA selects a preferred alternative for a site in a Proposed Plan that is made available to the public for comment and in the administrative record file. Following receipt of public comments, EPA selects and documents the remedy selection decision in a record of decision (ROD). The ROD documents the remedial action plan for the site and serves the following three functions:

- (1) certifies that the remedy selection process was followed pursuant to CERCLA,
- (2) describes the technical parameters of the remedy, specifying the methods selected to protect human health and the environment including treatment, engineering and institutional control components, as well as cleanup levels and
- (3) provides the public with a consolidated summary of information about the site and the chosen remedy and rationale behind the selection.

EPA has directed that the LWG Feasibility Study's evaluation of remedial alternatives should include, and estimate the cost for, the anticipated steps necessary to comply with the ESA. Ideally, with input from NMFS, those would be presented in a general fashion in the Feasibility Study and taken into account in EPA's Proposed Plan. It would likely be necessary to consult with NMFS in the context of each site specific detailed remedy design and implementation (i.e., post Feasibility Study and ROD) in order to provide site specific terms and conditions; however, the steps identified in the Feasibility Study could serve as a framework for those later consultations. In particular, NMFS should provide the LWG and EPA with its agency expertise and opinion regarding ESA requirements for actions under various situations and impacting important life stages, 16 USC § 1533(d), so that such information could be incorporated in the Feasibility Study, Proposed Plan and ROD.

III. ENDANGERED SPECIES ACT REQUIREMENTS

A. SECTION 7(a)(2) CONSULTATION AND STANDARD

In contexts outside CERCLA, the ESA imposes both procedural and substantive requirements for protection of endangered and threatened species. In the context of CERCLA, due to the federal permit exemption, it is only the substantive ESA obligations that apply.

Generally, section 7(a)(2) of the ESA requires every federal agency to “insure that any action authorized, funded or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification” of that species’ critical habitat. Federal agencies carry out this obligation by “consulting” with either the U.S. Fish and Wildlife Service or the NMFS. Informal consultation is an optional process that involves discussions and correspondence between the NMFS and the action agency.¹ Informal consultation is designed to assist the action agency in determining whether formal consultation is required. Informal consultation may flesh out those federal activities that may have “beneficial, discountable, or insignificant effects upon listed species or their critical habitat. . . .”² If these types of activities are identified, the NMFS issues a “not likely to adversely affect” opinion, which exempts the activity from potential jeopardy violations and eliminates the need to undertake formal consultation. 50 CFR § 402.13.

Formal consultation is required when an agency’s proposed action may affect a listed threatened or endangered species or its habitat. 50 CFR § 402.14. Consultation commences with the action agency’s written request for consultation and concludes with NMFS’ issuance of a biological opinion that states whether the proposed action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of its critical habitat. The first step in the formal consultation process is to determine whether any listed species or designated critical habitat may be present in the proposed action area. If there is a species or proposed critical habitat present, then it is the action agency’s responsibility to develop a biological assessment that analyzes the effects of the proposed action on the species and its habitat based upon the best scientific and commercial data available during consultation. 50 CFR § 402.12.

1. Jeopardy versus No-jeopardy

Formal consultation results in NMFS issuing either a “jeopardy” or a “no jeopardy” biological opinion. A biological opinion can reach one of three conclusions: (1) that there will

¹ Informal consultation differs from early consultation in that informal consultation occurs after an action has been proposed while early consultation occurs prior to application. There is no overlap between the two processes. *See* 51 Fed Reg at 19,943 (discussing distinction).

² *Id.* At 19,949.

be no jeopardy to the continued existence of the species and no destruction or adverse modification of critical habitat (a “no-jeopardy opinion”), (2) that the proposed action will jeopardize the continued existence of the species or result in the destruction or adverse modification of critical habitat but that specified reasonable and prudent alternatives (RPAs) will avoid that jeopardy or adverse modification, or (3) that the action will jeopardize the continued existence of the species or destroy or adversely modify critical habitat and no reasonable and prudent alternatives are available (a “jeopardy opinion”). 50 CFR 402.02.

In a no-jeopardy biological opinion, NMFS will provide a statement that specifies: (1) the amount of incidental take of a species; and (2) reasonable and prudent measures and associated terms and condition to minimize the effect of any incidental take occurring as a result of the proposed action. 50 CFR § 402.14(i)(1)(ii). NMFS’ conditions “cannot alter the basic design, location, scope, duration, or timing of the action and may involve only minor change.” 50 CFR § 402.14(i)(2). Therefore, the final federal approval should look much like the proposed action with minor conditions imposed to reduce the effect of any incidental take.

A jeopardy opinion must include RPAs that an agency could take to avoid jeopardy and that can be implemented and NMFS must discuss with the agency and the applicant the availability of RPAs that could be taken to avoid a finding of jeopardy. 50 CFR § 402.14(h)(3). RPAs are actions that: (1) “can be implemented in a manner consistent with the intended purpose of the action;” (2) “can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction...;” and (3) are “economically and technologically feasible.” 50 CFR § 402.02 (defining “reasonable and prudent alternatives”).

If, however, no reasonable and prudent alternatives can be identified, then the NMFS must issue a jeopardy opinion without alternatives. If the jeopardy opinion concludes that the proposed action would jeopardize the species or destroy or adversely modify critical habitat, the agency may (1) withdraw the proposed action or (2) apply for an exemption from the Endangered Species Committee, the application procedures for an exemption are set out in 50 CFR part 450. *See* 16 USC § 1536(e)-(h)(1985).

2. What does it mean to “jeopardize the continued existence of a species?”

The Services have defined this term by regulation to mean:

“to engage in an action that would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”
50 C.F.R. § 402.02.

3. The jeopardy analysis must consider the impact of the proposed action in the “context” of the environmental baseline.

The Ninth Circuit has explained that jeopardy analysis is not a comparative one that focuses on a project’s “proportional share”, but an aggregate one. *National Wildlife Federation v*

National Marine Fisheries Service, (“*NWF v. NMFS*”), 524 F.3d 917 at 930 (9th Cir. 2007). That is, any proposed agency action must be evaluated in the context of the existing environmental baseline in order determine whether the proposed action, when added to the “present and future human and natural contexts,” will jeopardize listed species. *Id.* The court has referred to this approach as an aggregate analysis in which one considers both the current environmental baseline and the cumulative effects. Cumulative effects are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to the consultation. 50 CFR § 402.02. This aggregate analysis applies with equal force to any consultation. At first glance, this can create a seeming barrier to actions when, as often is the case, the baseline conditions are such that the species is already in (or near) jeopardy. In subsequent consultations, NMFS staff has sometimes suggested to private applicants that their project will cause jeopardy because of baseline conditions. However, the Ninth Circuit has also rejected arguments that baseline conditions alone could result in jeopardy to the species.

At the same time that the Ninth Circuit explained that the jeopardy analysis must consider degraded baseline conditions, the court also explained that this interpretation does not “have the effect of preventing any federal action once background conditions place a species in jeopardy.” *NWF v. NMFS*, 524 F.3 at 930. That is so because the word “jeopardize” commonly means to “expose to injury” or to “imperil,” both of which imply “causation, and thus some new risk of harm.” *Id.* As a result, where baseline conditions already imperil a species, an agency can still take action as long as the new action does not “cause some new jeopardy,” or “deepen[] the jeopardy by causing additional harm,” or cause “some deterioration in the species’ pre-action condition.” *Id.* An agency is free to take an action that “removes a species from jeopardy entirely, or that lessens the degree of jeopardy.”

In the context of a remedial action, the environmental baseline is usually significantly degraded. For instance, the Biological Opinion for the Superfund Remedial Action in the Middle Waterway/Commencement Bay Nearshore/Tideflats Superfund Site (at p. 11) found that environmental baseline had been affected by expanding urban development, railroads, shipping, logging, agriculture, and other industries as well as numerous habitat alterations such as dredging, diking and relocation of portions of the river, construction of waterways, steepening and hardening of formerly sloping shorelines with riprap and a variety of other materials and other on-going development. That development had left the estuarine habitat “seriously degraded by the presence of toxic and hazardous contaminants in the sediment, which is the habitat for the prey organisms of juvenile salmonids. The baseline conditions of the Action Area are a major factor in the current depressed status of the [Puget Sound] chinook.” *Id.* At 12.

NMFS has generally concluded that sediment remedial actions will have a long term positive effect on the species, because both the removal and/or isolation of contaminated sediments and, ultimately, the attendant reduction in contamination of the water column will improve the baseline conditions. NMFS has also generally found that such actions can have short-term detrimental impacts but that scheduling work to avoid the juvenile salmonid migration period and implementing engineering controls and best management practices can appropriately minimize those adverse short-term effects. For example, based on these factors, NMFS concluded that the variety of remedial action projects proposed in the Middle Waterway,

incorporating the proposed minimization elements, would not likely jeopardize the Puget Sound chinook.

4. The jeopardy analysis must jointly consider impacts to survival and recovery.

The Ninth Circuit has held that the jeopardy analysis must consider both survival and recovery although there is no affirmative duty to recovery of the species. *See NWF v. NMFS*, 524 F.3d at 932 (Ninth Circuit relying on its previous decision in *Gifford Pinchot Task Force v. F.W.S.*, 378 F.3d 1059 (9th Cir. 2004), found that use of the word “both” referred to a “joint survival and recovery concept.”) To properly apply this joint concept, the agency “must analyze the effects on recovery as well as on survival.” *Id.* at 933. The Court went on to explain that while the Services must consider both survival and recovery, that “recovery impacts alone may not often prompt a jeopardy finding,” and that jeopardy in such a case would require “exceptional circumstances.” *Id.*

The Ninth Circuit’s interpretation of jeopardy as “causing some new jeopardy” has another significant ramification. It also likely means that the agency has no obligation under 7(a)(2),³ to affirmatively ensure that the proposed action contributes towards survival or recovery. It is enough that the action does not “appreciably diminish” the species chances.

5. NMFS must also evaluate whether critical habitat will be adversely modified or destroyed.

The Services previously defined adverse modification or destruction of critical habitat as a “direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of the species.” 50 C.F.R. 402.02 That regulation was invalidated in *Gifford Pinchot Task Force v. F.W.S.*, 378 F.3d 1059 (9th Cir. 2004), because it did not properly consider the value of critical habitat in the recovery and conservation of the species. In *NWF v. NMFS*, the Ninth Circuit explained that this analysis, like the jeopardy analysis, is aggregate in nature. 524 F.3d at 934. Therefore, just as “[a]n agency action can only ‘jeopardize’ a species’ existence if that agency action causes some deterioration in the species’ pre-action condition,” an action “appreciably diminishes the value of critical habitat” only when it would result in some additional or new harm to the function of that habitat. *NWF*, 524 F.3d at 930.

The Service has never replaced this regulation. NMFS has utilized a framework in its biological opinions that identifies the critical habitat primary constituent elements (“PCEs”) and then evaluates how the proposed action impacts those PCEs. Adverse modification will not occur if, after implementation of the proposed action, the critical habitat would remain functional (or retain the ability for the PCEs to be functionally established) to serve the intended conservation role for the species.

³ Federal agencies may have affirmative obligations under other provisions of the ESA such as Section 7(a)(1).

B. BIOLOGICAL REQUIREMENTS

NMFS will evaluate the status of the species and factors affecting the species in the action area, including the species' biological requirements within the action area.⁴ Typical biological requirements would include: adequate food source, water quality, habitat structure and quality, migratory access to and from potential spawning and rearing areas and biotic interactions. Primary constituent elements for salmonid critical habitats within the study area are described in the critical habitat designations. *See, e.g.*, 70 Fed Reg 52630 (9/2/05). As discussed above, NMFS will evaluate the effects of a proposed action as the direct and indirect effects of the action on the species or habitat together with the effects of other activities that are interrelated or interdependent with that action and that will be added to the environmental baseline. In the context of a CERCLA remedial action, NMFS will evaluate both long-term and short term effects on the species or habitat and provide avoidance and minimization measures. However, given recent Ninth Circuit holdings, NMFS should not conclude jeopardy on the basis of an existing degraded baseline; that is, NMFS would only find jeopardy if EPA's proposed action itself, as a whole, caused new jeopardy or deepened the jeopardy to the species. By definition, EPA's remedial actions under CERCLA are intended to improve the baseline conditions. Therefore, it is not surprising that in other circumstances when NMFS has evaluated the overall short-term and long term effects of contaminated sediment remediation projects, it has ultimately concluded no jeopardy because the baseline conditions will be improved.

IV. CERCLA AND ESA

A. EPA POLICY

While EPA recognizes that the ESA is an ARAR for CERCLA actions, EPA has distinguished between the ESA's substantive and procedural requirements for onsite actions. *See* 42 U.S.C. § 9621(e)(1) (“[n]o Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite”); 40 C.F.R. § 300.400(e)(1) (defining “onsite” as “the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action”). In its guidance document, EPA states that “[s]ubstantive compliance with the ESA means that the lead agency must identify whether a threatened or endangered species, or its critical habitat, will be affected by a proposed response action . . . [and] avoid the action or take appropriate mitigation measures so that the action does not affect the species or its critical habitat.” EPA, *CERCLA Compliance*

⁴ EPA defines “on-site” as “the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action.” 40 C.F.R. § 300.5; *see also* 42 U.S.C. § 9601(9)(B) (defining “facility” as “any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located”). Under the ESA, “action area” is defined broadly to include “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.

with Other Laws Manual: Part II. Clean Air Act and Other Environmental Statutes and State Requirements, OSWER Directive 9234.1-02, at 4-12 (August 1989). While EPA considers ESA consultation to be a procedural requirement from which onsite actions are exempt, EPA states that consultation is “*strongly recommended* for cleanup actions conducted entirely on site, since such procedures were designed to ensure compliance with the ESA.” *Id.* (emphasis added).

There appears to be a divergence between when EPA’s 1989 guidance suggests such consultation may occur and when, in practice, EPA has been seeking at least formal consultation. EPA’s guidance indicates that compliance with ESA requirements should be documented in the Remedial Investigation/Feasibility Study (RI/FS) report. *Id.* at 4-17. The guidance suggests this will be based on a consultation during the RI/FS, stating that the RI/FS should describe “the determination of whether endangered species or a critical habitat are or are not present; the results of the [biological assessment]; the results of the formal consultation or [biological opinion]; the impact, if any, of the CERCLA action; and the associated mitigation measures to minimize impacts.” *Id.* Also, the Record of Decision (ROD) should include a brief description of how the selected remedy complies with the substantive ESA requirements. *Id.* EPA expects that most projects will not require anything further than informal consultation. *Id.* In contrast, in a review of eleven recent Biological Opinions provided in the context of contaminated sediment remediation projects, most of which were part of CERCLA remedial actions, all eleven of those Biological Opinions were provided at the action implementation stage (whether as an early action or post-ROD remedial action), rather than during the RI/FS.⁵

B. REVIEW OF BIOLOGICAL OPINIONS FOR CONTAMINATED SEDIMENTS REMEDIAL ACTION

While EPA’s guidance indicates that substantive compliance with ESA is through the ARARs and the majority of projects will not require anything more than informal consultation, it appears that EPA’s general practice is to consult under 7(a)(2) with NMFS on remedial actions whenever listed species and critical habitat are present. The table below summarizes biological opinions (BiOps) as a result of 7(a)(2) consultations completed by EPA and NMFS related to federal and state-led cleanup projects from sites in Commencement Bay, Portland Harbor, and other locations in Oregon and Washington. Specifically, the table lists the cleanup site, date, listed species, short description of project action and decision point (i.e., during action implementation, during remedy selection, etc.). All of the BiOps listed in the table are for remediation of contaminated sites and the NMFS’ conclusions were generally the same for all of the opinions. NMFS concluded that the proposed remedial actions were not likely to jeopardize the continued existence of these species or destroy/adversely modify critical habitat. NMFS effects analysis determined that contaminants and habitat loss are likely to at least temporarily adversely affect listed species in the short term, however the long term benefits outweigh temporary impacts. NMFS did require in some circumstances mitigation projects to offset loss of habitat from bank hardening or change in elevation profile or temporary impacts to habitat.

⁵ See table Summary of Cleanup Related Biological Opinions below.

Summary of Cleanup Related Biological Opinions

Site Name	Site Location	Listed Species (Date listed)	Project Actions	Decision Point (i.e., during action implementation, during remedy selections, etc.)	Year(s)	Project Owner	Action Agency	Comments
McCormick and Baxter Creosoting Company	Portland Harbor	Upper Willamette River (UWR) Chinook (1999); Lower Columbia River (LCR) Chinook (1999); Columbia River (CR) chum (1999); Upper Willamette River (UWR) steelhead (1999); Lower Columbia River (LCR) steelhead (1998)	Construction of a barrier wall	Action implementation	2002	DEQ	EPA	McCormick and Baxter Record of Decision (ROD) issued March 1996; McCormick and Baxter ROD Amendment, issued March 1998.
Mouth of the Hylebos WW--Segments 3,4, and 5 (Blair Slip 1 CDF)	Commencement Bay	Puget Sound Chinook (1999)	CDF, dredging, capping, MNR	Action implementation	2003	Occidental Chemical and Port of Tacoma	EPA	Commencement Bay Record of Decision (ROD) issued September 30, 1989, Explanations of Significant Difference issued in 1993, 1997, 2000 (identified Endangered Species Act as an ARAR and mitigation framework), 2002, 2003, and 2004.
Middle Waterway--Areas A and B	Commencement Bay	Puget Sound Chinook (1999)	Dredging, capping, MNR, demolition	Action implementation	2003	Middle WW Action Committee (Foss and MINI)	EPA	Commencement Bay Record of Decision (ROD) issued September 30, 1989. Explanations of Significant Difference issued in 1993, 1997, 2000 (identified Endangered Species Act as an ARAR and mitigation framework), 2002, 2003, and 2004.
Todd Shipyard	Harbor Island--Duwamish River/Elliott Bay	Puget Sound Chinook (1999)	Dredging, capping, demolition, structure construction	Action implementation	2003	Todd Pacific Shipyards Corporation	EPA	Harbor Island (Lead) Record of Decision (ROD) issued November 27, 1996
Thea Foss WW Remedial Action (St. Paul WW CDF)	Commencement Bay	Puget Sound Chinook (1999)	CDF, dredging, capping, demolition/structure construction	Action implementation	2004	City of Tacoma	EPA	Commencement Bay Record of Decision (ROD) issued September 30, 1989. Explanations of Significant Difference issued in 1993, 1997, 2000 (identified Endangered Species Act as an ARAR and mitigation framework), 2002, 2003, and 2004.
NW Natural "Gasco"	Portland Harbor	UWR (1999); LCR Chinook (1999); LCR steelhead (1998); UWR steelhead (1999); CR chum (1999); LCR coho (2005); UCR spring run Chinook (1999); Snake River spring/summer run Chinook (1992); Snake River fall run Chinook (1992); Snake River Basin steelhead (1997); UCR steelhead (1997); MCR steelhead (1999); Snake River sockeye (1999)	Dredging, capping	Action implementation	2005	NW Natural	EPA	NW Natural Action Memorandum Issued June 17, 2005
Port of Portland Terminal 4	Portland Harbor	UWR Chinook (1999); LCR Chinook (1999); LCR steelhead (1998); UWR steelhead (1999); CR chum (1999); LCR coho (2005); UCR spring run Chinook (1999); Snake River spring/summer run Chinook (1992); Snake River fall run Chinook (1992); Snake River Basin steelhead (1997); UCR steelhead (1997); MCR steelhead (1999); Snake River	Dredging, capping	Action implementation	2008	Port of Portland	EPA	Terminal 4 Action Memorandum issued May 11, 2006

Site Name	Site Location	Listed Species (Date listed)	Project Actions	Decision Point (i.e., during action implementation, during remedy selections, etc.)	Year(s)	Project Owner	Action Agency	Comments
		sockeye (1991); Southern Distinct Population Green sturgeon (2006)						
Port of Olympia Cascade Pole Sediment Remediation (MTCA Clean-up)	Puget Sound - Budd Inlet	Puget Sound Chinook (1999)	Dredging, shoreline containment structure/restoration	Action implementation	2001	Port of Olympia	Corps	Court ordered agreement for site was entered into in 1990
Rhodia--Suttle Road Facility	Oregon Slough-- Columbia River	LCR Chinook (1999); CR chum (1999); LCR steelhead (1998); UCR spring run Chinook (1999); Snake River spring/summer run Chinook (1992); Snake River fall run Chinook (1992); UCR steelhead (1997); MCR steelhead (1999); Snake River Basin steelhead (1997); Snake River sockeye (1991)	Capping	Action implementation	2003	Rhodia	Corps	Record of Decision (ROD) for site issued on September 17, 1999 and an Explanation of Significant Difference that identified the sediment cleanup was issued in 2002
Youngs Bay Tar Removal	Columbia River Estuary	UWR Chinook (1999); LCR Chinook (1999); LCR steelhead (1998); UWR steelhead (1999); CR chum (1999); LCR coho (2005); Southern Distinct Population Green sturgeon (2006); UCR spring run Chinook (1999); Snake River spring/summer run Chinook (1992); Snake River fall run Chinook (1992); Snake River Basin steelhead (1997); UCR steelhead (1997); MCR steelhead (1999); Snake River sockeye (1991)	Dredging, capping	Action implementation, but NMFS reviewed EECA and suggested a remedy (suggested remedy was not selected)	2004	PacificCorp	Corps	Record of Decision (ROD) for site was issued February 5, 2005
Alcoa Vancouver Sediment Remediation Project (MTCA Clean-up)	Columbia River (Vancouver)	LCR Chinook (1999); LCR coho (2005); LCR steelhead (1998); MCR steelhead (1999); CR chum (1999)	Dredging, ENR, slope reconfiguration	Action implementation	2008	Alcoa	Corps	Consent Decree lodged in January 2009 for sediment cleanup

V. RECOMMENDED FRAMEWORK FOR PORTLAND HARBOR

In general, in a ROD, EPA will document the remedy selection decision and the remedial action plan for a particular site or operable unit. All subsequent remedial design and remedial actions are to be in conformance with the remedy selected in the ROD. 40 C.F.R. § 300.435(b). By serving as the mechanism by which EPA selects the remedy and specifies its implementation, it appears that ESA consultation on the ROD may be appropriate as an action “authorized” by a federal agency. However, it appears that EPA’s common practice, driven in part by the timing of species listings during or after ROD development, has been to consult informally under section 7(a)(2) on the ROD and to formally consult on the specific implementation of the remedial actions in conformance with the ROD. EPA has the discretion to define its ESA compliance process because CERCLA states “No federal, * * * permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this Section.” 42 USC § 9621(e)(1). Additionally, the ESA has been identified as an action-specific ARAR pursuant to 42 USC § 9621(d)(2), and which suggests that the appropriate timing of the ESA’s application is during remedy implementation. Given this statutory and regulatory framework, the EPA has some flexibility in designing an ESA process for the Portland Harbor Cleanup.

EPA has directed the LWG to incorporate the scope and cost of ESA compliance into its presentation of alternatives in the Feasibility Study. Including this information in the Feasibility Study will allow EPA’s Proposed Plan and ROD to take into consideration the scope and cost of the likely ESA terms and conditions. In order for the LWG to do this, EPA (and the LWG) must engage with NMFS now at some level of consultation. However, based on EPA and NMFS’s practice of consulting at the site-specific remedy implementation stage, it appears likely that such input from NMFS now into the Proposed Plan and ROD, perhaps depending on the specificity of that consultation and whether implementation projects fall squarely within it, may not obviate the need for separate later consultations at the implementation stage to address specific site characteristics.

We therefore recommend that the LWG encourage EPA and NMFS to conduct a formal or informal consultation under 7(a)(2) at this time to identify generally those minimization and avoidance elements that will be necessary to avoid jeopardy with respect to the alternatives being evaluated in the Feasibility Study. This input should be integrated into the mitigation matrix currently under discussion between EPA, NMFS and the LWG.⁶ With this input, when EPA issues its ROD for a selected Plan, EPA will be able to use NMFS input to address NMFS’

⁶ For reasons of the schedule, the alternatives analysis in the Feasibility Study needs to proceed with the draft of the mitigation matrix to be discussed at the May 20, 2010 meeting with NOAA and EPA. If further revisions are made based on additional NMFS input, they could be taken into account by EPA at the time it writes the Proposed Plan or the ROD.

concerns in a programmatic manner. This approach would ensure that EPA will consider and account for the costs of the ESA mitigation actions, terms and conditions because EPA would be considering potential ESA mitigation actions while applying the nine criteria for Plan selection. Subsequent individual section 7(a)(2) consultations, if necessary, could be tiered to the programmatic consultation on EPA's ROD.

If this approach is taken, we should encourage EPA and NMFS to develop the BiOp (or the BiOp equivalent if a formal consultation is not conducted) for the ROD in a similar manner to NMFS authority under a 4(d) rule. Section 4(d) of the ESA authorizes the Services to issue special regulations with respect to the conservation of threatened species. A section 4(d) rule is intended to relieve or reduce the blanket prohibition against incidental take and describes how to avoid take of a particular species and provides an express safe harbor provision. Taking such an approach could provide more certainty with respect to the anticipated costs of the ESA measures while still allowing flexibility to evaluate individual site characteristics in the subsequent tiered 7(a)(2) consultation. This approach seems consistent with the current mitigation matrix that evaluates the relative effects of various mitigation approaches, taking into account different site characteristics and their importance to salmonid life stages. If EPA were to take this approach, as a first step, the LWG could provide EPA with a draft Biological Assessment that frames the issue and assesses the project's expected impact on the species.

We do not recommend that EPA request in the context of the Portland Harbor Superfund Site that NMFS consult with it on the protectiveness of the water quality criteria being applied as screening or performance criteria. As discussed above, the "action" on which EPA has a "substantial equivalent" consultation obligation is its Proposed Plan and ROD, which is the collection of the remedial action alternatives that will be implemented throughout the site. Reliance on existing water quality criteria is only one small piece of the larger action. Additionally, no alternatives (even including the "no action" alternative) would appear likely to degrade water quality overall. By focusing instead on the actions as whole, and defining the consultation with that focus, NMFS will be able to provide the LWG and EPA its expertise on best management practices to minimize the short-term impact on the species and critical habitat so that the positive impact of the long-term improvements can be attained.